

LES SCHWAB PRIEST RIVER (PWSNO 1090242) SOURCE WATER ASSESSMENT REPORT

October 10, 2002



State of Idaho Department of Environmental Quality

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SOURCE WATER ASSESSMENT FOR LES SCHWAB PRIEST RIVER

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your drinking water source is based on well construction characteristics; site specific sensitivity factors associated with the aquifer the water is drawn from; a land use inventory inside the well recharge zone; and water quality history. For non-community transient water systems like Les Schwab Priest River, recharge zones were generally delineated as a 1000-foot fixed radius around the wells.

This report, *Source Water Assessment for Les Schwab Priest River* describes factors used to assess susceptibility to contamination. The analysis relies on information from available well logs; an inventory of land use and potential contaminant sites identified through a Geographic Information System database search; and information from the public water system file. The ground water susceptibility analysis worksheet for Les Schwab Priest River is attached.

Taken into account with local knowledge and concerns, this assessment should be used as a planning tool to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

Well Construction. Les Schwab Priest River is located next to State Highway 2 about 1.5 miles west of Priest River, Idaho. A 202-foot deep well serves the water system. It is situated at the toe of the scarp north of the tire center, approximately 20 feet from the north property line and 70 feet from the west property line.

The 6-inch steel well casing extends from 18 inches above ground to a depth of 58 feet, where it terminates in decomposed granite. A 4-inch PVC liner, perforated for the last 100 feet, extends to the full depth of the well. The surface seal penetrates a clay bed before terminating in sand 18 feet below land surface. The static water level stands 98 feet below ground.

When the system was inspected in 1999 the rain cap on the well casing needed to be replaced with a watertight, vented well cap, and the area around the well needed to be graded to slope away from the casing.

Well Site Characteristics. Hydrologic sensitivity scores are derived from information on the well log and from the soil drainage classification inside the recharge zones delineated for your well. Soils in the well recharge zone for Les Schwab Priest River are predominantly poorly drained to moderately well drained. Soils in this drainage classification provide some protection against migration of contaminants toward the well. At the well site, approximately 30 feet of clay and 105 feet of bedrock lie between a water bearing layer of sand near the surface and the deeper productive layers of the well.

Potential Contaminant Inventory. A golf course occupies about 60 per cent of the land encompassed in the recharge area delineated for the Les Schwab well. Heavy irrigation and use of fertilizers and pesticides make golf courses potential sources of ground water contamination. State Highway 2, crossing the delineation boundaries about 450 feet south of the well is the only other significant potential source of contaminants in the vicinity.

Water Quality History. Les Schwab Priest River, under regulation as a non-community transient public water system, is required to monitor quarterly for bacterial contamination. In the period from December 1998 through the present all samples tested were negative. Annual nitrate samples collected between 1998 and 2002 show concentration ranging from 0.441 to 0.537mg/l. The Maximum Contaminant Level (MCL) for nitrate is 10 mg/l. Required testing was missed during several reporting periods.

Susceptibility to Contamination. An analysis of the Les Schwab Priest River well, incorporating information from the public water system file and the potential contaminant inventory, ranked the well moderately susceptible to all classes of regulated contaminants. Maintenance issues, risk factors associated with local geology, and land use inside the delineation boundaries contributed almost equally to the final susceptibility scores. The complete analysis worksheet for your well is on pages 6 of this report. Formulas used to compute the final susceptibility scores are at the bottom of the worksheet.

Source Water Protection. This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For Les Schwab Priest River drinking water protection activities should focus on the maintenance items outlined in the 1999 Sanitary Survey of the system. Sloping the ground away from the well head, and providing a watertight, vented well cap are particularly important for preventing the entrance of surface contaminants into the ground water.

Because the well is close to the property line, Les Schwab Priest River does not have jurisdiction over the entire sanitary setback for its well. The system needs to buy or lease a sufficient amount of land to ensure it has control over a minimum 50-foot radius around the wellhead.

The system might find it helpful to develop a written maintenance and testing schedule so important tasks are attended to routinely. Every system should have an emergency response plan. There is a simple fill-in-the-blanks form available on the DEQ website (<http://www.state.id.us/deq/water/water1.htm>) to guide systems through the emergency planning process. Les Schwab Priest River might also find a ground water protection program like Home*A*Syst helpful. These programs are designed to help well owners assess everyday activities for their potential impact on drinking water quality. Topics include septic tank management, petroleum product storage, handling and storing lawn and household chemicals and similar activities. The goal of source water protection is to maintain current water quality for the future. Preventing contamination of an existing well is far more cost effective than having to replace a source damaged through neglect.

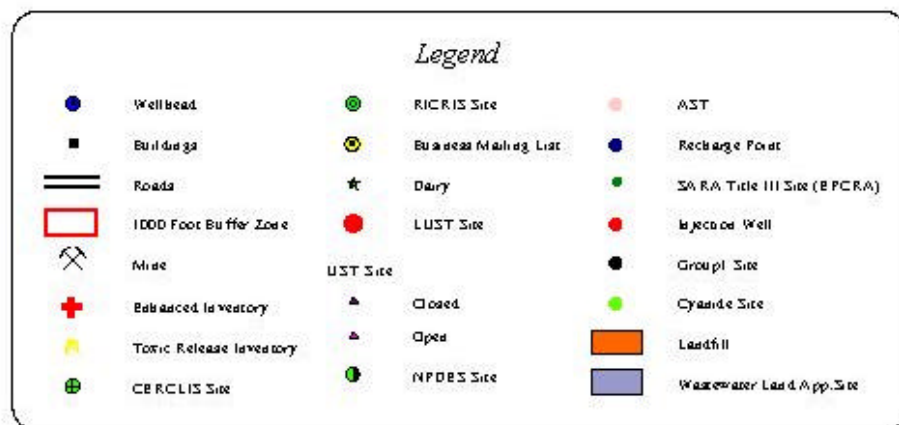
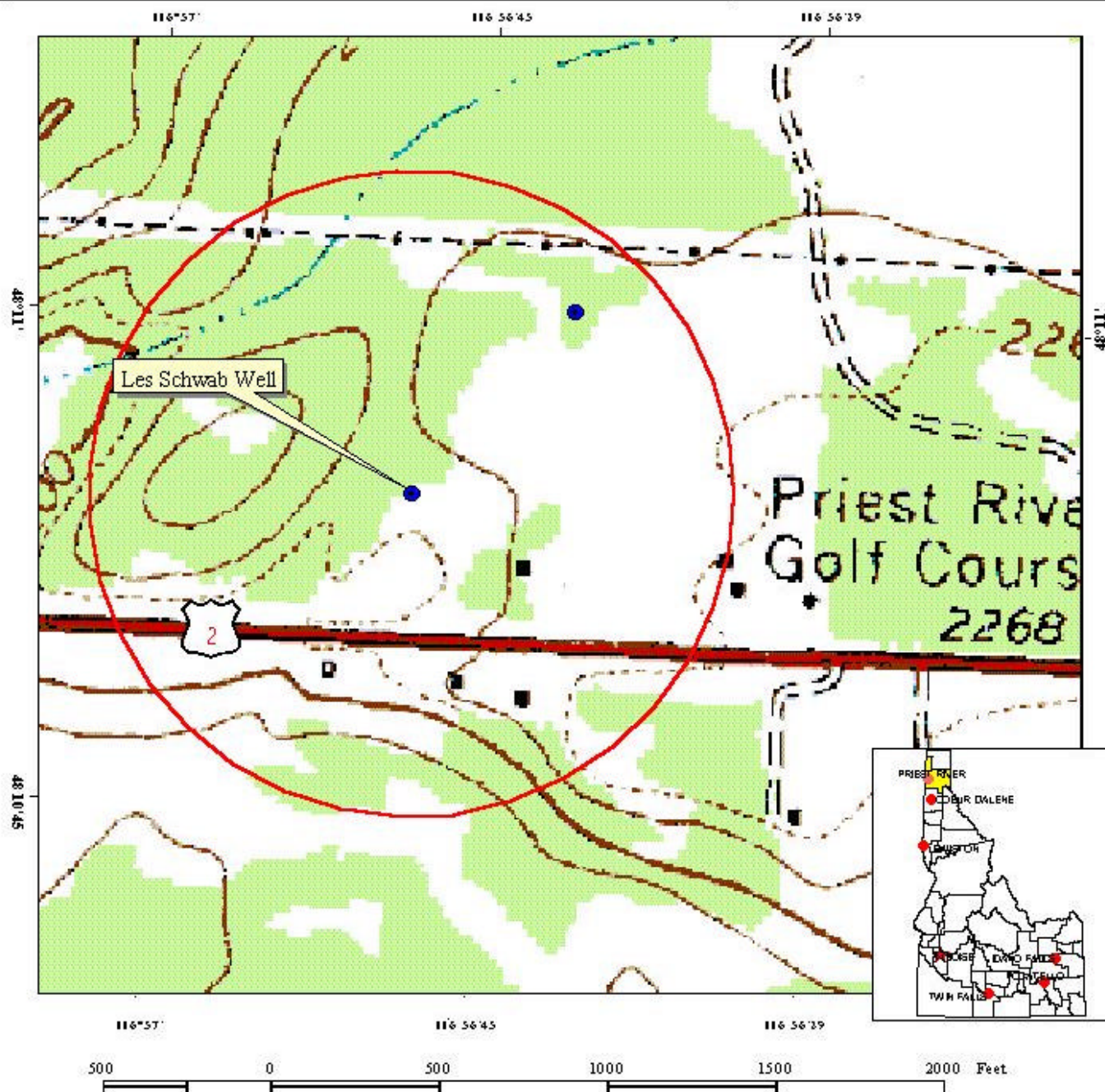
Assistance. Public water suppliers and users may call the following IDEQ offices with questions about this assessment and for help with drinking water protection planning.

Coeur d'Alene Regional DEQ Office (208) 769-1422

State IDEQ Office (208) 373-0502

DEQ Website: <http://www.deq.state.id.us>

Figure 1. Les Schwab Priest River Delineation and Potential Contaminant Inventory.



PWS # 1090242
Les Schwab
Priest River
Well

Ground Water Susceptibility

Public Water System Name :

LES SCHWAB PRIEST RIVER

Well # :

WELL #1

Public Water System Number :

1090242

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1. System Construction			SCORE			
Drill Date	4/25/78					
Driller Log Available	YES					
Sanitary Survey (if yes, indicate date of last survey)	YES	1999				
Well meets IDWR construction standards	YES		0			
Wellhead and surface seal maintained	NO		1			
Casing and annular seal extend to low permeability unit	YES		0			
Highest production 100 feet below static water level	NO		1			
Well protected from surface water runoff	NO		1			
Total System Construction Score			3			
2. Hydrologic Sensitivity						
Soils are poorly to moderately drained	YES		0			
Vadose zone composed of gravel, fractured rock or unknown	NO		0			
Depth to first water > 300 feet	NO		1			
Aquitard present with > 50 feet cumulative thickness	NO		2			
Total Hydrologic Score			3			
3. Potential Contaminant / Land Use			IOC	VOC	SOC	Microbial
			Score	Score	Score	Score
Land Use	Suburban/Commercial		2	2	2	2
Farm chemical use high	NO		0	0	0	
IOC, VOC, SOC, or Microbial sources in Sanitary Setback	NO		NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Sanitary Setback			2	2	2	2
Potential Contaminant / Land Use - 1000-Foot Radius						
Contaminant sources present (Number of Sources)	YES	Highway 2	1	1	1	1
(Score = # Sources X 2) 8 Points Maximum			2	2	2	2
Sources of Class II or III leacheable contaminants or Microbials	YES		1	1	1	
4 Points Maximum			1	1	1	
1000-Foot Radius contains or intercepts a Group 1 Area	NO		0	0	0	0
Land use 1000-Foot Radius	58% Golf Course		4	4	4	4
Total Potential Contaminant Source / Land Use Score - 1000-Foot Radius			7	7	7	6
Cumulative Potential Contaminant / Land Use Score			9	9	9	8
4. Final Susceptibility Source Score			8	8	8	9
5. Final Well Ranking			Moderate	Moderate	Moderate	Moderate

* Automatically ranked highly susceptible due to spring and highway right of way in Sanitary Setback zone

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Ranking:

- 0 - 5 Low Susceptibility
 6 - 12 Moderate Susceptibility
 > 13 High Susceptibility

POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.